
Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2010; month=3; day=24; hr=10; min=10; sec=21; ms=495;]

Validated By CRFValidator v 1.0.3

Application No: 10550754 Version No: 3.0

Input Set:

Output Set:

Started: 2010-03-17 14:51:49.288

Finished: 2010-03-17 14:51:51.784

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 496 ms

Total Warnings: 20

Total Errors: 5

No. of SeqIDs Defined: 20

Actual SeqID Count: 20

| Error code | | Error Description |
|------------|-----|--|
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (1) |
| Ε | 257 | Invalid sequence data feature in <221> in SEQ ID (1) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| Ε | 257 | Invalid sequence data feature in <221> in SEQ ID (2) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (3) |
| E | 257 | Invalid sequence data feature in <221> in SEQ ID (3) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (4) |
| E | 257 | Invalid sequence data feature in <221> in SEQ ID (4) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (5) |
| Ε | 257 | Invalid sequence data feature in <221> in SEQ ID (5) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (6) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (7) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (8) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (9) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (10) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (11) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (12) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (13) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (14) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (15) |

Input Set:

Output Set:

Started: 2010-03-17 14:51:49.288 **Finished:** 2010-03-17 14:51:51.784

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 496 ms

Total Warnings: 20
Total Errors: 5
No. of SeqIDs Defined: 20

Actual SeqID Count: 20

| Error code | | Error Description | | |
|------------|-----|--|--|--|
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (16) | | |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (17) | | |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (18) | | |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (19) | | |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (20) This error has occured more than 20 times, will not be displayed | | |

SEQUENCE LISTING

```
<110> BUSCHLE, MICHAEL
      HABEL, ANDRE
      FRITZ, JORG
      PRINZ, KARIN
      LINGNAU, KAREN
<120> IMPROVED VACCINES
<130> SONN:076US
<140> 10550754
<141> 2005-09-23
<150> PCT/EP2004/003002
<151> 2004-03-22
<150> EP 03450072.8
<151> 2003-03-24
<150> EP 03450084.3
<151> 2003-04-11
<150> EP 03450171.89
<151> 2003-07-11
<160> 20
<170> PatentIn version 3.5
<210> 1
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<220>
<221> MOD_RES
<222> (1)..(9)
<223> X = any positively charged amino acid
<400> 1
Xaa Glx Xaa Glx Glx Xaa Glx Xaa
<210> 2
<211> 10
<212> PRT
<213> Artificial Sequence
```

```
<223> Synthetic Peptide
<220>
<221> MOD_RES
<222> (1)..(10)
<223> X = any positively charged amino acid
<400> 2
Xaa Glx Xaa Glx Glx Glx Xaa Glx Xaa
     5
<210> 3
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<220>
<221> MOD_RES
<222> (1)..(11)
<400> 3
Xaa Glx Xaa Glx Glx Glx Glx Xaa Glx Xaa
              5
                                 10
<210> 4
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<220>
<221> MOD_RES
<222> (1)..(12)
<223> X = any positively charged amino acid
<400> 4
Xaa Glx Xaa Glx Glx Glx Glx Glx Xaa Glx Xaa
               5
<210> 5
<211> 13
<212> PRT
```

<220>

```
<220>
<223> Synthetic Peptide
<220>
<221> MOD_RES
<222> (1)..(13)
<223> X = any positively charged amino acid
<400> 5
Xaa Glx Xaa Glx Glx Glx Glx Glx Xaa Glx Xaa
<210> 6
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 6
Lys Leu Lys Leu Leu Leu Leu Lys Leu Lys
<210> 7
<211> 26
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 7
Ile Cys Ile Cys
                          10
Ile Cys Ile Cys Ile Cys Ile Cys
           20
                              25
<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
```

<213> Artificial Sequence

```
Gly Leu Cys Thr Leu Val Ala Met Leu
<210> 9
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 9
Ile Ala Ser Asn Glu Asn Met Glu Thr Met
    5
<210> 10
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 10
Thr Met Leu Tyr Asn Lys Met Glu Phe
              5
<210> 11
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 11
Ser Ser Ile Ala Ala Gln Asp Ala Leu
<210> 12
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
```

<400> 8

<400> 12

```
Val Thr Ile Leu Asn Leu Ala Leu Leu
<210> 13
<211> 22
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 13
Lys Phe Pro Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu Pro
              5
                                10
Arg Arg Gly Pro Arg Leu
         20
<210> 14
<211> 14
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 14
Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr
<210> 15
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 15
Asp Leu Met Gly Tyr Ile Pro Ala Val
1 5
<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence
```

<220>

```
<223> Synthetic Peptide
<400> 16
Cys Ile Asn Gly Val Cys Trp Thr Val
<210> 17
<211> 23
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 17
His Met Trp Asn Phe Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser
Thr Leu Pro Gly Asn Pro Ala
           20
<210> 18
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Peptide
<400> 18
Tyr Met Asp Gly Thr Met Ser Gln Val
    5
<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic primer
<400> 19
                                                                     20
tccatgacgt tcctgatgct
<210> 20
<211> 18
<212> DNA
<213> Artificial Sequence
```

<223> Synthetic primer

<400> 20

tccatgacgt tcctgatg